

CORRELATION OF BODY MASS INDEX (BMI) AND FULFILMENT OF BASIC NEED FOR GROWTH AND DEVELOPMENT WITH ACHIEVEMENT LEVEL OF KINDERGARTEN STUDENTS' GROSS MOTOR SKILL DEVELOPMENT

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Abstract– This research studies the following problems: (1) is there any correlation between Body Mass Index (BMI) and achievement level of Smart School Kindergarten students' gross motoric skill development in Kendari City. (2). Is there any correlation between fulfilment of basic need for growth and development with achievement level of Smart School Kindergarten students' gross motoric skill development in Kendari City. This research aims to determine whether any correlation between Body Mass Index (BMI) with development with achievement level of Smart School Kindergarten students' gross motoric skill development in Kendari City and correlation of fulfilment of basic need for growth and development with achievement level of Smart School Kindergarten students' gross motoric skill development in Kendari City.

This research is EX-post Facto research using survey as its method in the form of correlational. These research populations are all students in the age of 4 – 6 years that are distributed in Smart School Kindergarten, namely there are 135 children. The data are obtained through questionnaire distribution and weighting records.

Results of the research show that: (1) there is a significantly strong correlation between Body Mass Index (BMI) with development with achievement level of kindergarten students' gross motoric skill development as shown by Contingency -Phi ($C\Phi$) correlation coefficient by 0.8660 and its significance with level of significance α by; 0.05: $df=9$ shown by value of $\chi^2_{arithmetic} = 67.5504 > \chi^2_{table} = 16.9190$; and (2) there is a significantly strong correlation between fulfilment of basic need for growth and development with development with achievement level of kindergarten students' gross motoric skill development; its significance is shown by value of $\chi^2_{arithmetic} = 67.0510 > \chi^2_{table} = 16.9190$ in level of significance α ; 0.05: $df=9$, while correlation closeness is shown by Contingency -Phi ($C\Phi$) correlation coefficient level by 0.8310.

Based on these findings, it can be concluded that there is a significantly strong correlation, both Body Mass Index (BMI) with development with achievement level of kindergarten students' gross motoric skill development and in the variable of fulfilment of basic need for growth and development with development with achievement level of kindergarten students' gross motoric skill development for Smart School Kendari kindergarten students.

Index Term: Body Mass Index, Basic Needs, Children Gross Motor Skills

1 INTRODUCTION

Implementation of early childhood education one of which is addressed to assist children physical growth and development so that they can achieve a level of good physical growth and health as well as achievement of optimal motoric (gross and fine) ability development. This is based on the Law Number 20 of 2003 concerning National Education System. Early Childhood education (PAUD) is a guidance effort addressed for children since they are until the age of six years old that is conducted through provisions of education stimulants in order to assist early childhood physical and spiritual growth and development so that they have preparedness in entering further education level (Yuliani, 2009: 84)

One of the development aspects as the main focus in physical health education given to children in the level of Kinder-

garten is gross motor skill development. This aspect, according to Nugraha and Dwiwana (2009: 37) can be developed optimally if it is supported by fulfilment of its basic needs, such as stimulation of gross motoric motion, provision of standardized nutrition and examination and treatment of child health status. These are the key factor to form healthy body supporting achievement of gross motor skill development.

Degree of children gross motor skill development at the following children development stages as changes in gross motor quality aspect is a continuation of stimulatory results of children gross motoric skills from an early age. However, the development of motoric motion quality level is largely determined by three main factors, namely maturity degree of children physical growth and development of gross motoric mo-

tion, growth stimulation (breastfeeding, MP-ASI, adequate nutritional nutrition and fulfillment of affection) from the parents and children caregivers, these three factors must still be supported by basic exercises of gross motoric motion based on child's motor-readiness and maturity, some experts on child health education, one of which Sumantri (2005: 26) has proven this and suggested that nutrition and health greatly influence on children physical growth and fitness. Lack of sufficiently nutrition with balanced nutrition can cause children physical development such as being sluggish, helpless, and inactive, whereas children in their early childhood who obtain nutrition in the form of nutritious food with varied menu pattern in a fairly balanced portion, supporting environment, honing, caring and nurturing parents can instill values of good, clean and healthy behavioral habits, can support children growth and development well at optimal development level, in this case the development of children gross motor skills.

In order to achieve a good quality in the development of children gross motor skills, then children parents at home must pay attention to their health status and their nutrition sufficiency as well as gross motoric skill stimulation efforts in an early manner as possible gradually and also with love so that the children will be happy and delighted. Without any sufficient nutrition (as can be seen through measurement of children body mass index (BMI), and stimulation of right-targeted motoric motion, and appropriately applied in stages with full affection, physical growth (body height and weight) and development of children gross motoric motion dimensions will be hampered or disturbed. Parenting is accompanied by caresses of affection and motoric stimulation through enjoying gross motor games and activating ones for children. In addition, development of mental / cognitive aspects also influences on children physical motoric growth and development, both in terms of children height and weight (Body Mass Index), and in terms of demonstrating various types of motor-physical motor skills that require the use of motion fatigue, agility, and strength of children motoric aspects.

In provision of nutritious food and drink for children, according to Gustian, (2001:48) it should consider a matter of children dietary habit that can lead to obesity. Obesity is a condition in which a child has a greater body weight than other normal children and is in the range of an abnormal body mass index. Obesity can greatly provide bad effects on the level of development of a child's gross motor skills. Children who are overweight will experience obstacles in terms of carrying out various gross motor activities that make it lazy to practice motoric abilities, so that gross motor skills of obese children will be far left behind their peers who are in normal category. One of the causes of obesity in children, in addition to pattern of excessive or poorly controlled feeding, is also due to the lack of obtaining motion stimulation to carry out gross motor activities from parents, causing a lack of activities needed to burn fat and calories in their bodies.

Child nutrition fulfillment efforts as can be seen through measurement of child's body mass index (BMI), health care parenting with care and affection from parents to children, and efforts to habituate motion through appropriate pattern of gross motor-motorized stimulation for children gross motor

developmentallegedly have a close correlation with development stages of children gross motor skills in kindergarten. Because, a quality of motoric active motion is a result of a long and interconnected collaboration between attempted dimension factors. Thus, it can be understood that paying attention to body mass index (BMI / TB), dimensions of fulfilment of basic need for child development in the dimensions of parenting, compassion and sharpening of the child's biological parents, as well as intact development dimensions can optimize achievement of children gross motoric skill development, especially students of Smart School Kindergarten Kendari.

Based on the description on the background, this study aims to determine and analyze the correlation between Body Mass Index and Fulfillment of Basic Growth Needs with the Achievement Level of Gross Motoric Skills in Children Aged 4-6 years (A Collective Study in Smart School Kindergarten - Kendari City).

II. RESEARCH METHOD

2.1. Research location and designs

This research is carried out by taking data collection at three location "Smart School" Kindergarten (TK) units in the urban area of Kendari. The collection of research data was carried out in April to the end of May 2014.

This research is an Ex-Post Facto study using a survey method in the form of correlational, aiming to test using a quantitative analysis approach of nonparametric statistical test techniques for two possibilities "Whether there is a significant correlation between Body Mass Index Variable (X1) with Achievement of Children Gross Motoric Skill Development variable (Y)"; and "whether there is a significant correlation between Fulfillment of Basic Needs for Growth and Development variable (X2) and Achievement Level of Children Gross Motoric Skill Development variable (Y)".

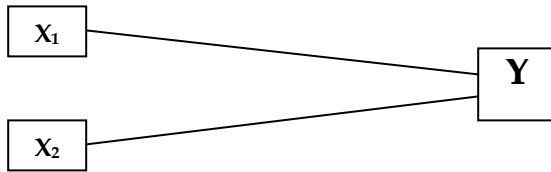
Achievement level of children gross motor skill development variable given the symbol Y, is the variable whose its field data objects are summary data from the kindergarten teachers evaluating using kindergarten rules, namely the category values with star symbol of children gross motor development achievement level, which are divided into four categories of motoric development outcomes which have significant values:

Very Well Development (BSB), According to Hope-Development (BSH), Starting to Grow (MB); and achievement value of motoric development that is categorized as Yet Developing (BB).

Variable data (Y) is ordinal scalenominal data since it is an assessment data in the form of achievement level of gross motoric development. Characteristics of ordinal data do not show the same interval but only show tiered categorical data, and appropriate statistical test analysis tool for nominal or ordinal data, namely through nonparametric statistical test methods (Riduwan, 2011: 34); (Irianto, 2010: 19); and Sukmadinata (2012: 35).

Based on the description, the variables as the objects of this study consist of three variables, which will be tested for significance level of correlation through nonparametric statistical test techniques. The variables in question are two independent

variables, namely Body Mass Index (BMI) as a "X1Variable, and Basic Needfulfillment of Child Growth as a "X2 Variable "; and one dependent variable that is given the symbol "Y" which is achievement level of kindergarten children gross motoric development. The correlation design is described as follows:



Info:

:Independent variable (X1) =

Body Mass Index (body height or weight or Kg/cm)

Independent variable (X2) =

Fulfilment of Children Growth and Development Basic Needs

Dependent variable (Y) =

Level of Children Gross Motoric Development

2.2 Population and Samples

The population in this study are all 4-6 year old students distributed to 3 Smart School kindergarten units in Kendari City. The number of population in each unit of Smart School kindergarten branch in Kendari city is shown in the following table.

Table 2. Distribution of Early Childhood Students of Smart School Kindergarten in Kendari City

No	Smart SchoolKindergarten	Number of students
1	TK Smart School Branch of Kadia	90
2	TK Smart School Branch of Baruga	21
3	TK Smart School Branch of Andounohu	24
Total		135

Based on results of population data found in the three Smart School kindergarten units, it is known that the number of population units only ranges from 100 to 150 units, so the researcher will make all members of the population as the research samples, and this research is regarded as a population research withsaturated samples or total samples; The total number of population is 135, then 45 children are used as samples for testing the X2variable data instrument, namely; 21 children in Smart School Branch of Baruga; and 24 children in Smart School Branch ofAndounohu, while the remaining 90 children in Smart School Branch of Kadia; all of which are used as samples of this study.

III. DISCUSSION

Based on description of research data results and correlation test analysis results and its results described in previous chap-

ters, it can be seen that Achievement Level of Gross Motor Skill Development closely relates to Body Mass Index variable and Achievement Level of Growth and Development basic needs in Smart School Kendari kindergarten students.

Body Mass Index is a comparison index of body height and body weight. It illustrated a child body proportion consisting of some components, which its main components are bones, muscles, tendons, joints, organs, fat. Out of these several components, the easiest to change is muscle. Body composition is related to distribution of muscle and fat throughout the body. Excess fat in the body, can cause obesity or also called Obesity, and excess fat in the body can worsen motoric motion activities in sports because it does not contribute to the energy produced by muscle contraction. This can have implications for increasing body weight because it requires additional energy to be able to move the body's motor.

Such conditions in which there is unbalance body height and body weight as Body Mass Index components or called as abnormal condition can influence on body fitness level which lead to implications on achievement level of children gross motor skills. This is supported by statistic analytical results which its results show that there is a positive and significant correlation between Body Mass Index variable with Achievement Level of Gross Motor Skill Development variable in Smart School KindergartenKendari students.

Such significant close correlation is stated in the form of arithmetic Chi-Kuadrat coefficient ($\chi^2_{arithmetic}$) for correlation significance and Contingency -Phi ($C\Phi$) correlation coefficient for correlation closeness significance. Arithmetic Chi-Squarecoefficient value ($\chi^2_{arithmetic}$) by = 67.5504 in positive value in fact significantly different to its comparison value namely table Chi-Square coefficient by 16.919. So, it obtains coefficient value of ($\chi^2_{arithmetic}$) by = 67.5504 which is greater than coefficient value of $\chi^2_{table} = 16.919$, which its trustable validity level by 95% with error level by 5%. In fact, based on correlation test results of Contingency -Phi ($C\Phi$), it obtains coefficient value by 0.866 as categorized in very strong correlation. Such results indicate a proof that there is a very strong correlation between Body Mass Index variable and Achievement Level of Gross Motor Skill Development in Smart School Kendari kindergarten students.

Strong positive correlation shown significantly from the Chi-Square test results (χ^2) and results of the Contingency -Phi correlation test ($C\Phi$), illustrates that better and normal child's Body Mass Index will also have a positive effect on the child'sAchievement Level of Gross Motor Skill Development. It also implies that better or normal child's Body Mass Index (BB / TB) will lead to better child's Achievement Level of Gross Motor Skill Development. The magnitude of changes in thechild's Achievement Level of Gross Motor Skill Development is very dependent on the amount of support from normal or adequate body mass index (BB / TB) variable.

Based on data analysis results in this research, it also illustrates that to obtain optimal achievement level of Gross Motoric Skill, it is necessary for quite high or adequate Body Mass Index. These research results are also supported by previous researches regarding obesity which is Body Mass Index has positive and negative effects of excessive fat when doing gross

motoric motion through soft sport activities or even sport motions with flexible gross motoric motion. Muscles or free of fat tissues as components giving effects on Body Mass Index generally also give beneficial effects, since it closely relates to production and condition of force, meanwhile excessive body fat will increase practice metabolic value with high intense gross motoric motion use.

Increased amount of body fat is related to maximum oxygen consumption rate, meanwhile less balanced oxygen rate in a body will influence on one's physical condition in doing many sport motion practices with high intense gross motoric skill use. But, a little amount of body fat can also lead to decreased body fitness effectivity in moving which depends on gross motoric skill with high intense of gross motoric motion use (Murniasuh Eri, 2010:3).

A research on men with obesity in Japan shows that body fitness level which can be seen in low or lack Body Mass Index in obesity men or very obesity men indicate lower level if compared to subjects in normal or borderline category (Miyatake. N., 2001: 707). Other research results also support this research result namely 9-years-ethnical group in England indicate that short children and children with obesity from normal condition have worse physical fitness level in doing movements which they depend on use of gross motoric skill compared to other children with relatively normal Body mass Index

3.1 Correlation of Achievement Level of Gross Motoric Skill Development And Body Mass Index

Correlation between Achievement Level of Gross Motoric Skill Development and Body Mass Index is also statistically proven through hypothesis testing, which its correlation is the significance of the Chi-Square test results (χ^2). Based on the criteria reference for Ho's rejection in the significance test through the Chi-Square (χ^2) significance test technique, the test results can be concluded that because $\chi^2_{arithmetic} (67.5504) > \chi^2_{table} (16.919)$; at a significance level of $\alpha 0.05$ with db $(r-1) (k-1) = (4-1) \cdot (4-1) = 3 \times 3 = 9$, thus Ho is rejected which means the alternative hypothesis or Ha is accepted meaning that "There is a significant correlation between variables (X1), namely the Body Mass Index ($BMI = BB / TB$) with variable (Y) namely the Achievement Level of Gross Motoric Skill Development in Smart School Kindergarten Kendari Students who are the population units in this study.", it has also been predicted in the test whether there is a correlation between two variables that is carried out through the Gamma test technique (Y), and it has been proven as a correct prediction that there is a significant correlation between Variable (X1) namely the Body Mass Index ($BMI = BB / TB$) with Variable (Y) namely the Achievement level of Gross Motoric Skill Development in Smart School Kindergarten Kendari Students who are the population units in this study.

The Gamma Index value (Y) which reaches 0.8455 obtained from the results of this study shows that the contribution of the Body Mass Index to Increased or Decreased Level of Gross Motoric Skill Development in Smart School Kindergarten Students is Gamma Index (Y) = $0.84552 \times 100\%$ which is $0.71489 \times 100\% = 71.49\%$. In this case there are other factors which are

also predicted by 28.51% which can influence on the Achievement Level of Gross Motoric Skill Development in kindergarten students.

As one of the variables that correlates with the Achievement Level of Children Gross Motoric Skill Development, the Body Mass Index (BMI) also has significant benefits. The benefits of a normal body mass index ($IMT = BB / TB$) can create ideal gross motoric motion, so that in performing gross motoric motion, the value of their effectiveness can be achieved optimally and the degree of productivity in doing sports can increase, especially in sports with high intensity of gross motoric use. This is reinforced by some opinions of experts, including those proposed by Syarif (2002: 34) that paying attention to the Body Mass Index in normal Body Weight and Height (BB / TB) index unit as the easiest way to estimate obesity or overweight and high correlation with body fat mass. In addition, it is also important for the purpose of identifying patients who are obese or who have a body composition problem that exceeds normal level of getting medical complication risks. Furthermore, it is said, that Body Mass Index ($BMI = BB / TB$) can describe condition of excessive body fat, simple and can be used in large-scale population research in looking at its effect on the level of one's physical fitness which can influence on the Achievement Level of Gross Motor Development in early childhood.

This study result also indicates that there is a significant correlation between the Achievement Level of Gross Motoric Development and the Development Fulfillment Level of Basic Needs for Smart School Kindergarten Students in Kendari. Results of the analysis obtained in the work of this research data analysis through the Gamma correlation prediction test (Y), the Chi-Square significance test (χ^2) and the Contingency - Phi test ($C\Phi$), indicate the existence of a significantly positive and strong correlation. The preliminary prediction result of the Gamma correlation test (y) which show index numbers approaching 1.0 is = 0.8273, which means that there is a strong tendency to have a correlation between the achievement level of gross motoric development (Y) and the fulfillment level of basic growth needs (X2) at the Smart School Kindergarten Kendari. The Gamma correlation test results (y) whose index number reaching = 0.8273, informs a strong prediction that the variable of Fulfillment Level of Basic Needs for Growth and Development contributes to a large amount of $0.82732 \times 100\% = 68.44\%$ in describing the variable of Achievement Level of Gross Motor Development Outcomes in Smart School Kindergarten Students Kendari, while the remaining of = 31.56% is influenced by other variables.

Results of the Gamma (y) correlation test prediction are reinforced by the findings obtained from the results of the significance test analysis through the Chi-Square test (χ^2) which shows the results for the data frequencies in the significant correlation analysis between the Fulfillment Level of Basic Needs and the Achievement Level of Gross Motoric Skill Development of Smart School Kindergarten Students in Kendari, it is obtained that the arithmetic Chi-Square coefficient value ($\chi^2_{arithmetic}$) is far greater than the table Chi-Square (χ^2_{table}) at the significance level of 95% or $\alpha; 0.05$ with the degree of freedom (db) = $(4-1) (4-1) = 9$. In statistical terms, the Chi-

square coefficient value ($\chi^2_{arithmetic}$) = 62.0510 > ($\chi^2_{arithmetic}$) = 16,919, based on the criteria in H_0 acceptance on the significance test of correlation through the Chi-Square test method χ^2 .

In accordance with the criteria reference for H_0 rejection in the significance test through Chi-Square significance test technique (χ^2), namely if: $\chi^2_{arithmetic} > \chi^2_{table}$ at the significance level α 0.05 with db (r-1) (k-1), then H_0 is rejected which means there is a significant correlation between X and Y; but if; coefficient value of $\chi^2_{arithmetic} \leq \chi^2_{table}$ value at the significance level between X and Y; But if; the coefficient of $\chi^2_{arithmetic} \leq \chi^2_{table}$ value at significance level α 0.05 with db (r-1) (k-1), then H_0 is accepted which means that there is no significant correlation between X and Y. Based on the testing criteria, the comparison of the Chi-square coefficient ($\chi^2_{arithmetic}$) = 62.0510 > $\chi^2_{arithmetic}$ = 16,919, states that H_0 is rejected and H_a is accepted which means "there is a significant correlation between the Fulfilment of Basic Growth Needs (X2) variable and the Achievement Level of Gross Motoric Development (Y) for students at Smart School Kindergarten".

Furthermore, after testing the correlation significance between both variables, the study results are also supported by the analysis results of the significant relationship. Based on results of the contingency-Phi ($C\Phi$) correlation test, it shows that there is also a very significant correlation between the Fulfillment Level of Growth and Development Basic Needs and the Achievement Level. It can be seen from the Contingency-Phi ($C\Phi$) coefficient which approaches 1.00, which is equal to = 0.831, which is based on relationship closeness criteria, such coefficient number mean a very strong correlation. Regarding the interpretation, Siegel (1992: 249) stated that in the correlation closeness analysis through the Contingency correlation (C) technique, the Contingency Correlation coefficient value (C or KK) must be transformed into the Phi (Φ) correlation coefficient value. It is intended, so that interpretation of correlation closeness between X and Y can use interpretation as used in the Product Moment correlation test. Because the Contingency Correlation Coefficient (C) value cannot be interpreted directly to describe the correlation closeness between (X) and (Y), because the highest number of Contingency Correlation Coefficients (C) is never = 1.00, so that looking at the reference criteria level of the correlation closeness that applies to the Product Moment correlation test, the C-Phi coefficient (Φ) = 0.831, means that "there is a strong correlation between the variables studied".

Based on the test results or based on the results of correlation significance analysis through the Chi-Square test (χ^2) and the strength test of the Contingency-phi relationship (C- Φ), it can be concluded that "Significantly there is a very strong correlation between the Fulfillment Level of Students Gross Motor Skills in Smart School Kindergarten Kendari as the research population.

3.2 Correlation or Closeness Between Fulfilment Level of Growth and Development basic Needs and Achievement Level of Kindergarten Students' Gross Motoric Development

Correlation or Closeness Between Fulfilment Level of Growth and Development basic Needs and Achievement Level of Kindergarten Students' Gross Motoric Development in Smart School Kendari as described in the test results above is supported by some arguments from experts in the field of early childhood education, one of which is Ismawati, et. al, (2010: 41) stating that in general there are two main factors that can influence on children growth and development in early age namely genetic factors and environmental factors. The genetic factors determine child's innate characteristics based on the child's ability (gross motor skills) as a distinctive characteristic that originates from his parents.

While environmental factors are the atmosphere which can influence the child's developmental achievements. The family environment with optimal pattern of nurturing and parenting can support growth and development since in the period of pregnancy to adulthood. A good home environment with fostering patterns in optimal growth-development nuances can support the growth of children to an optimal growth and development level, which is then the level of its fulfilment can also influence on children abilities which one of which is the development of gross motor skills.

The correlation closeness between the fulfillment level of basic needs for growth and development and the achievement level of gross motoric development in Kendari Smart School students and also the test results as described above are also supported by one of the research results conducted by Ginting, Elfrina. (2010), which it is concluded that there is a strong correlation between the fulfillment of nutrition and the level of gross motor development in children. Fulfillment of adequate and balanced nutrition is one component of fulfilling Basic Needs of Child Growth, namely the "Asih" component.

Results of this study are also strengthened by the opinion of early childhood health experts, one of which is Soetjiningsih (2005: 14) stated three components of basic needs, namely biomedical physical needs (ASUH); emotional / affection needs (ASIH) and need for mental-motor stimulation (ASAH). The component of basic needs, namely biomedical physical needs (ASUH) can influence on the child's physical fitness level with negative effect on the achievement level of a child's motor development and other child abilities. Meanwhile, the component of basic needs, namely emotional / affection needs (ASIH) is an absolute requirement to ensure harmony growth, both mentally and psychologically as well as the level of motor skill development. Lack of emotion / affection in the first years of a child's life will provide negative effects on its growth and development in further development processes both mentally, socially and physically-motorically. Meanwhile, the basic needs component of the need for mental-motor stimulation (ASAH) is the forerunner that guarantees children harmony growth and development process, both mentally and psychologically and the level of motor development. The lack of mental-motor stimulation in the first years of a child's life will provide negative effects on its level of growth in further child development processes both mentally, socially, as well as his physical-motor abilities.

Based on that statement, it can be drawn a conclusion that the Achievement Level of Gross Motoric Development has a

correlation or close correlation with the Fulfillment Level of Basic Needs for Child Growth and Development, in this case Kindergarten Smart School Kendari. Such a conclusion is reinforced by Yuliana's opinion (2008: 24) which is similar to the explanation of Ismawati (2010: 42), that the development of child abilities (Mental-Motoric) and growth are closely related to various levels of children's abilities, one of which is the level of children's motor skill development. Therefore, it is necessary to appropriately stimulate and direct motor skills in child development process according to the level of motor skills. One of the efforts is through playing with various forms of gross motoric games which is carried out with love and in an encouraging atmosphere for children. A child who obtains precise and directed gross motor stimulation will develop faster to reach the level of motor skill development than children who are lacking moreover never get early stimulation.

IV CONCLUSION

Based on the results and findings as described in previous research chapters, then it can be proposed the following conclusion:

1. There is a significantly positive and strong correlation between Body Mass Index and Achievement Level of Students' Gross Motoric Skill Development in Smart School Kendari. In this case, significantly, better children Body Mass Index namely in normal category tends to increasingly support the Achievement level of Gross Motoric Skill. The result is strengthened by findings obtained from correlation significance test analysis through Chi-Square (χ^2) test with the arithmetic Chi-Square value is far greater than the table Chi-Square value or χ^2 arithmetic = 67.5504 > χ^2 table = 16.9190 in significance level of α :0.05 with db = 9. Meanwhile, strong positive correlation in Contingency-Phi ($C\Phi$) correlation coefficient by 0.8660 is in very strong correlation category.
2. There is a significantly positive and strong correlation between Fulfilment Level of Basic Needs for Growth and Development and Achievement Level of Students' Gross Motoric Skill Development in Smart School Kendari. In this case, significantly, better fulfilment level of Basic Needs for Growth and Development and significantly in high category tends to increasingly support high Achievement level of Gross Motoric Skill. The result is strengthened by findings obtained from correlation significance test analysis through Chi-Square (χ^2) test with the arithmetic Chi-Square value is far greater than the table Chi-Square value or χ^2 arithmetic = 62.0510 > χ^2 table = 16.9190 in significance level of α :0.05 with db = 9. Meanwhile, strong positive correlation in Contingency-Phi ($C\Phi$) correlation coefficient by 0.8310 is in very strong correlation category.

V. RECOMMENDATION

Based on the research findings, then there are some recommendations given by the researcher, namely that to support the achievement level of gross motoric skill development, specifically for students in Smart School Kendari, it can carry out the following issues:

1. It should pay attention to the Body Mass Index (BB / TB)

with various factors that can cause obesity or weight loss, namely by consuming healthy foods with a balanced menu.

2. It is necessary to increase the Achievement level of Gross Motoric Skill Development for Kindergarten students, especially in Smart School Kindergarten Kendari, even further to the optimal level achievement of development, through several methods, among others: (a) activating children to always play active movements so that there is motivation for children to actively engage in sports activities anywhere and anytime; (b) atmosphere development, especially in PAUD / TK units through three approaches, namely approach to playing with individual motoric motion games or without using APE, approach to playing with forms of motoric motion in pairs, and approach to playing with group motoric motions; (c) advocacy in the form of services and protection as well as optimal attention to children for the need to play while learning and the needs of game equipment.
3. Given that children will grow optimally in accordance with their genetic abilities, it must be necessary to get positive support from surrounding children environment, especially kindergarten and home environment where they live, so that it is necessary to give special attention to these things for PAUD / TK teachers and biological parents of children. Efforts that need to be pursued optimally include; adequate housing, good and sufficiently balanced nutritional needs, adequate health care, and optimal-directed motoric stimulation.
4. Given some limitations in this study to obtain more objective and more representative research results, it is necessary for same research both in the same place and in different places by examining relevant variables and some improvements in terms of methodology.

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